

REMARKS

Claims 2-4, 7-16, 28, 29, and 31 were pending. Claims 7-9, 11, and 28 have been amended. Claim 35 has been added. Claims 2-4, 7-16, 28, 29, and 35 are pending.

Claims 2-4, 7-8, 10, 28-29, 31, and 32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,291,811 to Ogawa. Applicants respectfully request reconsideration of this rejection.

Claim 7 recites an imaging device including “a frame having a support structure,” and “a semiconductor imaging chip supported by said support structure, said semiconductor imaging chip having an array of photosensitive elements configured to receive an image and generate a plurality of corresponding image signals.” The imaging device also includes “a package encapsulating said frame, support structure, and semiconductor imaging chip in a transparent material, said transparent material covering said chip, said photosensitive elements receiving said image through said transparent material,” wherein “at least a portion of said transparent material supported in line with an image being received by said photosensitive elements of said semiconductor imaging chip is tinted to provide colored light filtering.”

Ogawa discloses an imaging device and a package formed of a transparent material. Ogawa does not teach a color filter being formed of the transparent material, as admitted in section 6 on page 8 of the Office Action. Thus, Ogawa does not teach or suggest, an imaging device including “a package encapsulating said frame, support structure, and semiconductor imaging chip in a transparent material, said transparent material covering said chip, said photosensitive elements receiving said image through said transparent material,” wherein “at least a portion of said transparent material supported in line with an image being received by said photosensitive elements of said

semiconductor imaging chip is tinted to provide colored light filtering.” Claim 7 is not anticipated by, and is patentable over, Ogawa. Claims 2-4, 8-10, 32, and 34 depend directly from claim 7, and are patentable over Ogawa for at least the same reasons.

Claim 28 recites an imaging device that includes, *inter alia*, “a housing having a cavity defined by side walls and a bottom surface,” and “a semiconductor imaging chip located within said cavity of said housing, said semiconductor imaging chip including an array of photosensitive elements configured to receive an image and generate corresponding signals, said photosensitive elements being covered by a transparent cover.” The semiconductor imaging chip is “encapsulated in a transparent material.” The transparent material “is disposed within said cavity and is contained by said side walls of said housing.”

Ogawa discloses an imaging device that includes a monolithic package formed of a molded transparent material. Ogawa does not teach or suggest an imaging device that features “a housing having a cavity defined by side walls and a bottom surface,” and “a semiconductor imaging chip located within said cavity of said housing” and “encapsulated in a transparent material” that is “disposed within said cavity and is contained by said side walls of said housing.” Ogawa does not anticipate or suggest, the invention recited in claim 28. Claim 28 is patentable over Ogawa. Claims 29, 31, 33, and 35 depend directly from claim 28, and are patentable over Ogawa for at least the same reasons.

Claims 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogawa in view of U.S. Pat No. 4,663,656 to Elabd et al. Applicants respectfully request reconsideration of this rejection.

Claim 11 recites an imaging system that includes “a transmitting system for transmitting an image including an image source, said transmitting system being arranged to transmit the entire image simultaneously onto each of a plurality of imaging devices.” Each of the plurality of imaging devices includes “a semiconductor device including an array of photosensitive elements, each semiconductor device being mounted on a respective frame, each of said frames having a support structure, each of said semiconductor devices receiving said image and generating corresponding signals.” Each frame, support structure, and respective semiconductor device “is encapsulated in a respective package for protecting and supporting each said semiconductor device, each of said packages being formed of transparent material, said transparent material including injection molded resin for transmitting the image from said image source onto said semiconductor devices.”

Ogawa discloses an imaging device with an array disposed in a molded plastic package. The Office Action, page 6 first full paragraph, admits that Ogawa does not teach a system for transmitting an image source onto each of a plurality of imaging devices. Applicants note further that Ogawa does not teach or suggest “a transmitting system for transmitting an image including an image source, said transmitting system being arranged to transmit the *entire* image simultaneously onto each of a plurality of imaging devices.” The Office Action relies on Elabd et al. to cure the deficiencies of Ogawa. Elabd et al., however, does not teach or suggest a “transmitting system being arranged to transmit the *entire* image simultaneously onto each of a plurality of imaging devices.” Instead, Elabd et al. discloses that imager 1 and imager 2 are edge-abutted to form a larger imager. Only a portion of the image is transmitted onto each imager. More particularly, rather than transmitting “the entire image simultaneously onto each of a plurality of imaging devices,” half of the image is received by imager 1, and the

other half of the image is received by imager 2. See col. 6, line 20 *et seq.* and FIG. 1.

Claim 11 is allowable over Ogawa in view of Elabd et al.

Further, the proposed combination of Ogawa in view of Elabd et al. lacks the motivation necessary to establish *prima facie* obviousness. Ogawa discloses imaging devices in which an imaging array is supported in a molded plastic package. The plastic package prevents two imaging arrays being “edge-abutted” as they would be according to the teachings of Elabd et al. Further, there is no motivation to split imager 1 and imager 2 of Elabd et al. and support them in respective molded plastic packages. In fact, doing so would destroy the invention of Elabd et al., a fundamental feature of which is to edge-abut imager 1 and imager 2. The motivation to combine the two references comes not from the cited prior art, but only from an improper hindsight attempt at reconstructing the invention of claim 11 using selected teachings of the references. Claim 11 is patentable over Ogawa in view of Elabd et al. Claims 12-16 depend directly or indirectly from claim 11, and are patentable over Ogawa in view of Elabd et al. for at least the same reasons.

Claims 9 and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogawa in view of U.S. Pat. No. 5,378,916 to Mantell. Applicants respectfully request reconsideration of this rejection.

Claims 9 and 34 depend from claim 7, which is patentable over Ogawa as discussed above. Mantell does not cure the deficiencies of Ogawa. Mantell discloses a photosensitive device arranged in a single-crystal structure. Different regions of the structure have different compositions so as to react to colored light differently. A color filter is not required for the device of Mantell. Further, if a colored filter is utilized, it is adapted to “fine tune” the color acuity of the system. See col. 7, line 57-col. 8, line 6. If a light filter is used, Mantell teaches that it can be “applied directly to, or in close

proximity to, individual wavelength sensitive regions of the device.” Mantell does not teach or suggest an imaging device that includes “a package encapsulating said frame, support structure, and semiconductor imaging chip in a transparent material, said transparent material covering said chip, said photosensitive elements receiving said image through said transparent material,” wherein “at least a portion of said transparent material supported in line with an image being received by said photosensitive elements of said semiconductor imaging chip is tinted to provide colored light filtering.” Further, whereas Ogawa is specifically adapted for MOS-type imagers (see col. 1, lines 20-25 and col. 14, lines 6-7), Mantell specifically applies to a CCD-type imager (see col. 1, lines 11-14 and col. 3, line 13 *et seq.*). Claim 7 is patentable over the proposed combination of Ogawa in view of Mantell. Claims 2-4, 8-10, 32, and 34 depend directly from claim 7, and are patentable over Ogawa in view of Mantell for at least the same reasons.

Claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogawa in view of U.S. Pat. No. 5,644,169 to Chun. Applicants respectfully request reconsideration of this rejection.

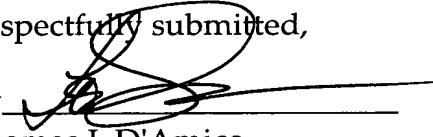
Claim 33 depends from claim 28. Claim 28 is patentable over Ogawa as discussed above. Chun does not cure the deficiencies of Ogawa. Chun has been cited as providing a ceramic package. Chun does not combine with Ogawa to provide the missing claim 28 features of “a housing having a cavity defined by side walls and a bottom surface,” and “a semiconductor imaging chip located within said cavity of said housing” that is “encapsulated in a transparent material … disposed within said cavity and is contained by said side walls of said housing.” Instead, Chun teaches a package having an opening 15a above the CCD imager. See FIG. 3. Further, Chun teaches that the opening 15a is covered by a transparent lid, whereas Ogawa provides a transparent

plastic package with no opening and no transparent lid. The two constructions being mutually exclusive, the cited references provide no motivation for their combination as proposed, but instead teach away from one another. Claim 28 is patentable over the proposed combination of Ogawa and Chun. Claims 29, 31, 33, and 35 depend directly from claim 28, and are patentable over Ogawa for at least the same reasons.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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